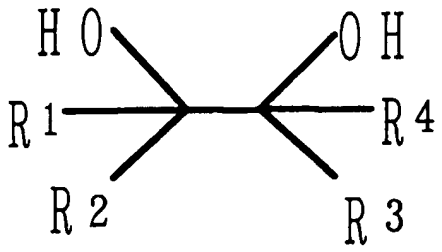
AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for producing a 1,2-diol compound represented by the general formula [2]:



[2]

wherein R^1, R^2, R^3, and R^4 independently represent a hydrogen atom or an alkyl group having 1-30 carbons in a straight or branched chain with or without a substituent ~~of one or more groups~~ selected from an alkoxy group, an alkoxycarbonyl group, a sulfonic acid group, a cyano group, a nitro group, a hydroxyl group, or a carboxyl group, or wherein any two of R^1, R^2, R^3, and R^4 lose a hydrogen atom to be bonded together to form a cycloalkane ring with a carbon atom bonding to any two of R^1, R^2, R^3, and R^4, comprising reacting an olefin compound represented by the general formula [1]:

$$R^1R^2C=CR^3R^4 \qquad [1]$$

wherein R^1, R^2, R^3, and R^4 are as defined above,

with hydrogen peroxide in the presence of a polymer compound having a sulfonic acid group (with the proviso that a silicon oxide-titanium oxide based synthetic zeolite is not used as a catalyst in combination with the polymer compound).

2. (Original) The method according to claim 1, wherein the hydrogen peroxide is in the form of an aqueous hydrogen peroxide solution.

3. (Previously presented) The method according to claim 1 or 2, wherein the polymer compound having a sulfonic acid group is a styrene polymer having a sulfonic acid group in a side chain of the polymer.

4. (Previously presented) The method according to claim 1 or 2, wherein the polymer compound having a sulfonic acid group is a styrene-divinylbenzene copolymer having a sulfonic acid group in a side chain of the polymer.

5. (Previously presented) The method according to claim 1 or 2, wherein the polymer compound having a sulfonic acid group is a fluorocarbon resin having a sulfonic acid group in a side chain of the polymer.